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Description

MULTIPOLE, PERMANENT-MAGNET ROTOR FOR A ROTATING
ELECTRICAL MACHINE, AND A METHOD FOR PRODUCING SUCH A
ROTOR SAME

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CLAIM FOR PRIORITY

This application claims priority to International
Application No. PCT/DE00/00853 which published in the
German language on September 28, 2000.

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TECHNICAL FIELD OF THE INVENTION

The invention relates to the field of rotating electrical
machines, and is applicable in particular, to the design
configuration of rotor cores which are fitted with
15 permanent magnets using what is referred to as a flux
concentration construction.

BACKGROUND OF THE INVENTION

Special ~~Now that special~~ permanent magnets, ~~referred to as~~
~~hard ferrite, have been successfully developed i.e.,~~ which
20 are matched to the stringent requirements of electrical
machines, ~~such magnets have now been used to an ever~~
~~greater extent~~ have been successfully developed. Such
magnets are used to produce the rotating magnetic field in
the rotating electrical machines. Various options for the
25 arrangement of the permanent magnets in the rotor or in
the stator have been developed for motors and generators
with rated powers up to 30 kW at 3000 rpm. In this case,
~~what is referred to as the~~ "flux concentration
construction" has been found to be the technically better
30 solution above a rated power of several hundred watts. One
embodiment of this construction is to arrange the
permanent magnets in the pole gaps in the rotor (Siemens
Journal 49, 1975, Issue 6, page 368 et seq./369, Figure
3). One known design solution for this purpose is to

